

In response to that Office Action, the Examiner is respectfully requested to amend the above-identified application as follows:

IN THE CLAIMS:

Please cancel Claims 2, 5, 6, 8-11, and 17, without prejudice or disclaimer of the subject matter presented therein.

Please amend Claims 1, 3, 4, 7, 12-16, 18, and 19 to read as follows. A marked-up copy of the amended claims, showing the changes made thereto, is attached.

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1. (Amended) An image processing apparatus comprising:
a saturation calculation unit arranged to calculate saturation information of an image;
a saturation conversion characteristic generating unit arranged to generate a saturation conversion characteristic on the basis of each conversion condition for low-saturation side and high-saturation side, where said saturation conversion characteristic shows the relationship between input saturation information and output saturation information; and
a saturation conversion unit arranged to convert the saturation of the image on the basis of said saturation conversion characteristic.

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3. (Amended) The apparatus according to claim 1, further comprising a conversion condition setting unit arranged to set said each conversion condition for low-saturation side and high-saturation side by using said saturation information.

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4. (Amended) The apparatus according to claim 1, further comprising an instruction unit arranged to make an instruction input by a user in order to set said each ~~conversion condition for low-saturation side and high-saturation side.~~

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7. (Amended) The apparatus according to claim 1, wherein said saturation ~~conversion characteristic exhibits a monotonous increase or a monotonous decrease.~~

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12. (Amended) The apparatus according to claim 1, further comprising:
a detection unit arranged to detect a color distribution of the image;
a generation unit arranged to generate gradation correction information of the image on the basis of the color distribution; and
a gradation correction unit arranged to perform gradation correction of the image on the basis of the gradation correction information.

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13. (Amended) The apparatus according to claim 12, wherein said saturation conversion unit performs saturation conversion for an image which has undergone the gradation correction by said gradation correction unit.

14. (Amended) The apparatus according to claim 12, wherein said generation unit comprises:
a highlight calculation unit arranged to calculate highlight area information of an image on the basis of the color distribution; and
a white balance calculation unit arranged to calculate white balance

information on the basis of the highlight area information and a predetermined highlight value,
and wherein

said gradation correction unit corrects gradation of the image on the
basis of the white balance information and the highlight value.

15. (Amended) The apparatus according to claim 12, wherein said
generation unit comprises

a shadow calculation unit arranged to calculate shadow area
information of an image; and

a black balance calculation unit arranged to calculate black balance
information on the basis of the shadow area information and a predetermined shadow value, and
wherein

said gradation correction unit corrects gradation of the image on the
basis of the black balance information and the shadow value.

16. (Amended) An image processing method comprising:

a saturation calculation step, of calculating saturation information of an
image;

a saturation conversion characteristic generating step, of generating a
saturation conversion characteristic on the basis of each conversion condition for low-saturation
side and high-saturation side, where said saturation conversion characteristic shows the
relationship between input saturation information and output saturation information; and

a saturation conversion step, of converting the saturation of the image

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on the basis of said saturation conversion characteristic.

18. (Amended) The method according to claim 16, further comprising a conversion condition setting step, of setting said each conversion condition for low-saturation side and high-saturation side by using said saturation information.

19. (Amended) A recording medium comprising program codes of an image processing method at least comprising:

code for a saturation calculation step, of calculating saturation information of an image;

code for a saturation conversion characteristic generating step, of generating a saturation conversion characteristic on the basis of each conversion condition for low-saturation side and high-saturation side, where said saturation conversion characteristic shows the relationship between input saturation information and output saturation information; and

code for a saturation conversion step, of converting the saturation of the image on the basis of said saturation conversion characteristic.

REMARKS

This application has been reviewed in light of the Office Action dated July 2, 2002. Claims 1, 3, 4, 7, 12-16, 18, and 19 remain pending in this application. Claims 2, 5, 6, 8-11, and 17 have been cancelled, without prejudice or disclaimer of the subject matter presented therein. Claims 1, 3, 4, 7, 12-16, 18, and 19 have been amended to define still more clearly what